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**United States Patent** [19]

Walch et al.

[11] **Patent Number:** **5,614,491**[45] **Date of Patent:** **Mar. 25, 1997**[54] **LIQUID PREPARATIONS CONTAINING  
CYCLOSPORIN AND PROCESS FOR  
PREPARING SAME**[75] Inventors: **Hatto Walch**, Laupheim - Baustetten;  
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Germany[73] Assignee: **Dr. Rentschler Arzneimittel GmbH &  
Co.**, Laupheim, Germany[21] Appl. No.: **347,289**[22] Filed: **Nov. 30, 1994**[51] **Int. Cl.<sup>6</sup>** ..... **A61K 38/00**; A61K 47/14[52] **U.S. Cl.** ..... **514/11**; 514/9[58] **Field of Search** ..... 514/9, 11[56] **References Cited****U.S. PATENT DOCUMENTS**

4,388,307	6/1983	Cavanak .	
4,803,081	2/1989	Falk et al. ....	424/888
5,206,219	4/1993	Desai .....	514/3

**FOREIGN PATENT DOCUMENTS**

0539319A2	4/1993	European Pat. Off. .
0589843A1	3/1994	European Pat. Off. .
3924207	1/1990	Germany .
641356	2/1984	Switzerland .
2222770	3/1990	United Kingdom .
2228198	8/1990	United Kingdom .
2230440	10/1990	United Kingdom .
WO92/09299	6/1992	WIPO .

*Primary Examiner*—Howard E. Schain*Assistant Examiner*—P. Lynn Touzeau*Attorney, Agent, or Firm*—Ratner & Prestia[57] **ABSTRACT**

The present invention pertains to cyclosporin-containing liquid preparations for oral or parenteral administration, as well as to a process for preparing same. Besides the active ingredient cyclosporin, the preparations contain a polyoxyethylene glycerol fatty acid monoester and a monohydric and/or polyhydric alcohol(s). The preparations are stable and well tolerated, and they have higher bioavailability than the preparations known currently.

**13 Claims, No Drawings**